

REMARKS/ARGUMENTS

In the Final Office Action, the following rejections were set forth: Claims 1-4, 16-18, and 33 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application 2003/0003383, of Van Der Werf et al. ("*Van Der Werf*"); Claims 5-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Van Der Werf* in view of U.S. Patent Application 2003/0090640 of Fujisawa et al. ("*Fujisawa*"); Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Van Der Werf* in view of U.S. Patent No. 5,796,467, issued to Suzuki ("*Suzuki*"); Claims 9, 10, and 13-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Van Der Werf* in view of *Fujisawa*; and, Claims 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Van Der Werf* in view of *Fujisawa*—as applied to Claim 9—and further in view of *Suzuki*.

By this response, no Claims have been added. However, Claim 1 has been amended to correct minor grammatical errors and to give patentable weight to the wording used within the original preamble. Accordingly, no new matter has been presented by these amendments since they are supported in the original specification, including the claims and figures. Reconsideration of this application is respectfully requested.

35 U.S.C. §102(b) Claim Rejections

Van Der Werf

Van Der Werf is directed to lithograph projection equipment and methods and toward products of such methods and equipment. More specifically, *Van Der Werf* discloses various movements of the mask; and in particular, a tilt of the mask about the X-axis for compensating for distortions in the projection objective. See *Van Der Werf*, paragraph [0060]. The effects of the various movements of the mask are illustrated in figures 7-12. For example, a rotation of the mask about the Z-axis results in a distortion, as shown in figure 9. Therefore, such a rotation may be used for compensating a distortion that has the same general characteristics as shown in figure 9, but wherein the directions of the arrows are reversed.

The general characteristics of a distortion that may be compensated for by tilting the mask by X-axis are shown in figure 11. In this context, the tilt "results in a trapezeudal array (parallelogram distortion with change in magnification in Y)." See *Van Der Werf*, paragraph

[0056]. However, *Van Der Werf* fails to disclose the Applicant's Claim 1; that is, "a method for the correction of a substantially linear distortion with two-fold symmetry." (Emphasis added.)

Referring to page 3, line 13 through page 4, line 11 of the Applicant's application, the characteristics of "linear distortion with two-fold symmetry" are described in detail. There, it is defined that "in the case of a linear distortion, the magnitude of the distortion vectors increases linearly the further they are removed from a particular reference-point which, for example, may be situated in the middle of the image field."

An example of linear distortion is depicted in Figure 4 of the application wherein the length of the distortion vectors increases linearly with increasing distance from the origin of the coordinate system, which is situated on the optical axis A. See Application, page 22, last paragraph. In contrast, the distortion shown in figure 11 of *Van Der Werf* is not a "linear distortion." That is, the length of the vectors does not increase linearly in the Y-direction. Although it is not explicitly stated in *Van Der Werf*, this increase in length is quadratic. (See Applicant's application at page 6, lines 28-32.) Additionally, there is not a single reference point, but merely a reference line; which results in a completely different distortion, as is clearly evident when comparing figure 4 of the present invention and figure 11 of *Van Der Werf*.

One of ordinary skill in the art measuring a linear distortion as shown in figure 4 of the present application would not learn from *Van Der Werf* that such a distortion could be effectively corrected by tilting the mask around the X-axis. Furthermore, *Van Der Werf* fails to disclose that under very particular circumstances—namely a projection objective that is non-telecentric on the object side and having an extra-axial field region—a linear distortion resembles a quadratic distortion that may be compensated for by tilting the mask around the X-axis. See Applicant's application at page 7, lines 12-16. As such, *Van Der Werf* fails to disclose or teach a method for the correction of a substantially linear distortion as claimed in Claim 1 of the Applicant's application.

It is to be noted that the claimed invention may be considered as applying a known method, i.e., tilting a mask around the X-axis, for correcting a certain image distortion for which this method has not been previously regarded as being suitable. The Applicant further notes that if a skilled person carries out the correction disclosed in *Van Der Werf*, such action would not necessarily correct linear distortion that may also be present. That is, the tilt angle and the tilting

orientation required for correcting the distortion shown in figure 11 of *Van Der Werf* (quadratic distortion) and correcting linear distortion are not the same.

Claims 2-7, 17, and 22 ultimately depend on Claim 1, which the Applicant respectfully submits has been shown to be patentably distinct over *Van Der Werf*. For the same reasons that Claim 1 is patentable over *Van Der Werf*, dependent Claims 2-4, 16, and 33-34 are also patentable over the cited references.

35 U.S.C. §103(a) Claim Rejections

Van Der Werf and Fujisawa

As shown above, *Van Der Werf* fails to disclose each and every element of Claim 1 of the application. Furthermore, *Fujisawa* fails to compensate for the shortcomings of *Van Der Werf* such that the combination of *Fujisawa* and *Van Der Werf* fails to teach or suggest modification to disclose each and every element of the Applicant's Claim 1. As such, Claim 1 is not rendered obvious in view of *Van Der Werf* in combination with *Fujisawa*. Claims 5-7, 9, 10, and 13-15 ultimately depend on Claim 1—which is now believed to be allowable—and includes every element thereof. For the same reasons that Claim 1 is not obvious in view of the combination of *Van Der Werf* and *Fujisawa*, dependent Claims 5-7, 9, 10, and 13-15 are also not obvious in view of the cited prior art.

Van Der Werf and Suzuki

As shown above, *Van Der Werf* fails to disclose each and every element of Claim 1 of the application. Furthermore, *Suzuki* fails to compensate for the shortcomings of *Van Der Werf* such that the combination of *Suzuki* and *Van Der Werf* fails to teach or suggest modification to disclose each and every element of the Applicant's Claim 1. As such, Claim 1 is not rendered obvious in view of *Van Der Werf* in combination with *Suzuki*. Claim 8 ultimately depends on Claim 1—which is now believed to be allowable—and includes every element thereof. For the same reasons that Claim 1 is not obvious in view of the combination of *Van Der Werf* and *Suzuki*, dependent Claim 8 is also not obvious in view of the cited prior art.

Van Der Werf and Fujisawa

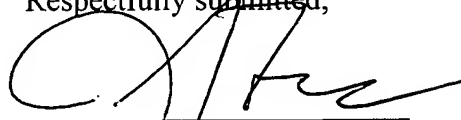
As shown above, *Van Der Werf* fails to disclose each and every element of Claim 1 of the application. Furthermore, neither *Fujisawa* nor *Suzuki* compensate for the shortcomings of *Van Der Werf* such that the combination of *Fujisawa* and *Suzuki* with *Van Der Werf* fails to teach or suggest modification to disclose each and every element of the Applicant's Claim 1. As such, Claim 1 is not rendered obvious in view of *Van Der Werf* in combination with *Fujisawa* and *Suzuki*. Claims 11 and 12 ultimately depend on Claim 1—which is now believed to be allowable—and includes every element thereof. For the same reasons that Claim 1 is not obvious in view of the combination of *Van Der Werf* and *Fujisawa* and *Suzuki*, dependent Claims 11 and 12 are also not obvious in view of the cited prior art.

CONCLUSION

The Applicant respectfully submits that the pending claims are in condition for allowance and requests removal of the rejections. Although the Applicant believes that no fees are required with this correspondence, if any fees are required, the Commissioner is authorized to debit Applicant's Deposit Account 50-0545 to cover the costs of any required fees. Should anything further be required, a telephone call to the undersigned, at (312) 226-1818, is respectfully invited.

Dated: May 16, 2006

Respectfully submitted,



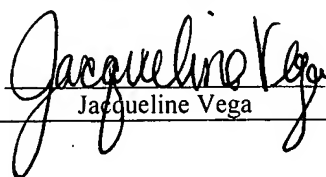
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope Addressed to: Box AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on May 16, 2006


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